

ABSTRACT

A hydrothermally-stable catalyst, method for making the same, and process for producing hydrocarbon, wherein the catalyst is used in synthesis gas conversion to hydrocarbons. In one embodiment, the method comprises depositing a compound of a catalytic metal selected from Groups 8, 9, and 10 of the Periodic Table on a support material comprising boehmite to form a composite material; and calcining the composite material to form the catalyst. In other embodiments, the support material comprises synthetic boehmite, natural boehmite, pseudo-boehmite, or combinations thereof.